

IFPS17.3 (Alpha)
!!!PRE-OB4.2 WFOs ONLY!!!
Installation Instructions
Wednesday, April 06, 2005

Installation Instructions for IFPS17.3

Table of Contents:

PART 0: Prerequisites.....	Page 3
PART 1: Pre-install Preparations.....	Page 5
PART 2: Install IFPS17.3	Page 8
PART 3: Post-Install Instructions for IFPS17.3	Page 14
PART 4: Deinstall Instructions for IFPS17.3	Page 17
Attachment 1: New/Merge/Replace File List for IFPS17.3.....	Page 20
Attachment 2: IFPS17.3 Install Space (<u>What if you don't have enough space?</u>).....	Page 27
Attachment 3: Sample IFPS Install Log File (<u>URL provided</u>).....	Page 28
Attachment 4: Customer Support Team (CST) Contact List.....	Page 29

PART 0: Prerequisite

Part 0 represents the portion of the IFPS17.3 install that can be done/verified prior to actually starting the install. Please read over this section and complete the items listed below. You should not continue with the IFPS17.3 install until all of these items have been satisfied.

1. **AWIPS Version Installed**

- a. At least AWIPS **OB4**, but **NOT OB4.2 or later**, and exactly **IFPS16.2** **MUST** be installed. On ds1 you may perform the following two (2) steps as any user (e.g., awipsusr, ifps, etc.)

- (1) To determine AWIPS release currently on your system, type the following command on any host:
> cat /awips/Release_ID

If the result does not match at least OB4, please install OB4 before continuing with the IFPS17.3 install or contact Robert (Bob) Rood at (301) 713-0211 x 177. If the result is OB4.2 or later, then you will need to [install on the DX machine](#).

- (2) To determine the IFPS release currently on your system, type the following command on any host:
>cat /awips/IFPS_Release_ID

If the result does not match exactly IFPS16.2, then please [install IFPS16.2](#), before continuing with the IFPS17.3 install.

2. Important Note: **Backup (i.e., make copies of) Important IFPS Files**

- a. See Attachment 1 for the list of data files, scripts, and database tables that are replaced or merged during the IFPS17.3 upgrade.
- b. Key files that MDL suggests should be backed up prior to starting the IFPS17.3 upgrade appear below. Please note that these files should be owned by user ifps, not root or awipsusr.
 - (1) Data files and Scripts
 1. /awips/adapt/ifps/localbin/ifps-ccc.env

3. **Warning:** The contents of /awips/GFESuite on PX and LX workstations will be populated with baseline GFESuite software. SITE and User configurations in /etc/SITE and data/databases will be preserved, but changes made elsewhere may not be preserved. **Please make backup copies of any site-created directories/files, or temporarily save them off to another location.**

Also, /awips/ifps/primary and /awips/ifps/svcbu directories on the LX workstations will be wiped out and replaced with IFPS17.3 software from px1. If you have any local software under /awips/ifps/primary or /awips/ifps/svcbu that does NOT exist on px1, **please make backup copies of these files or temporarily save them off to another location.**

4. **Warning:** There is a risk of '/awips/GFESuite' getting erased on RPP machines.

If you have any RPP machines attached to AWIPS network, please do the following steps to ensure that the contents of /awips/GFESuite directory and/or other important files are not erased from your RPP machine(s).

- a. As user root on px1, source /etc/rc.config.d/AWIPS file and look up \$LX_WOKRSTATIONS variable.
 - (1) > ./etc/rc.config.d/AWIPS
 - (2) > echo \$LX_WORKSTATIONSIf your RPP machine(s) is listed under \$LX_WORKSTATIONS, please edit the /etc/rc.config.d/AWIPS file, and modify the “export LX_WORKSTATIONS=” line, and delete your RPP machine from that list. The install script uses this variable to perform all install/upgrade on LX machines.

PART 1: Pre-install Preparations

Part 1 represents the steps necessary to prepare the system for the IFPS17.3 install. Part 1 through Part 3 within the install instructions need to be completed on the same day. It is estimated that the Part 1 and Part 2 will take approximately 90 minutes to complete. The time required for Part 3 depends on the amount of time it will take your site to verify the IFPS17.3 upgrade.

NOTE: During this installation, IFPS updates the contents of '/awips/GFESuite', '/awips/ifps/', and '/awips/adapt/ifps/bin' on all PX and LX machines. Therefore, please save off any locally created software that you might have under these directories to another location. This installation attempts to preserve any locally created software, however no guarantee is made regarding the preservation of locally created software.

Please follow the directions listed below.

1. **Be sure to look for addenda to the IFPS17.3 Install Instructions**
 - a. ***Before starting with the IFPS17.3 install, please review any updated Install Instructions and/or Lessons Learned at the following URL:***

<http://www.nws.noaa.gov/mdl/icwf/IFPS17.3Full/IFPS17.3.html>

The IFPS17.3 web page includes a number of other hypertext links including a link to the IFPS17 User's Guide.
2. **IFPS17.3 Install Space**
 - b. The chart in **Attachment 2** indicates the amount of space needed in each of the partitions for the specified host. If there is not enough space available, the install will stop in order to allow the IFPS-FP to free up space in the specified partition. The install can then be re-run. To save time during the installation, this chart may be used as a pre-install check of available space. All sizes are in kb.
 - c. If you need to clear up space under /data/adapt partition, you can safely delete some of the old IFPS and GFESuite backup files located under /data/adapt/ifps/backup directory. Backup files from IFPS15 or earlier (such as GFESuite15.tgz) can safely be removed.
3. **Partition permissions**
 - d. Make sure your critical partitions have correct permissions and ownership.
 - i. On all PXs and LXs, cd to /awips/ and check that permission to ifps and GFESuite directories are correct.
 - (1) >cd /awips
 - (2) >ls -al

Sample:

```
drwxrwxr-x  4  ifps  fxalpha  4096  Aug 27 15:02 GFESuite
drwxrwxrwx  4  ifps  fxalpha  4096  Aug 27 15:05 ifps
```

- ii. If the permissions and ownerships are not the same as shown above, change them as root.

```
(1)  >su root
(2)  >chmod 775 /awips/GFESuite
(3)  >chown ifps:fxalpha /awips/GFESuite
(4)  >chmod 777 /awips/ifps
(5)  >chown ifps:fxalpha /awips/ifps
```

4. **IMPORTANT: ssh ability between px1 and all hosts**

- e. Please make sure that you can ssh from px1 to all other PXs (including px1 itself) and all the LXs. This is important because IFPS install scripts will need to connect to other machines to install software and without proper permissions, it will fail. Make sure to monitor the output of the command below, looking for any problems.

Run the following command as user '**root**', on **px1**:

```
> /home/awipsadm/ssh/setupSSHkeys.sh
```

IMPORTANT: If you have any questions or notice any problems while running this script, please contact NCF before continuing with the install. It is imperative that ssh functionality is tested before starting with the install.

5. **Read permissions on files residing under ~ifps/localbin, ~ifps/data and ~ifps/Xdefaults.**

- f. Since the install of IFPS17.3 will be started from px1, it is necessary to make sure directories under /awips/adapt/ifps have correct permissions. This is necessary so that install scripts can backup appropriate files.
- g. Please make sure that all the files residing under /awips/adapt/ifps/localbin, /awips/adapt/ifps/data and /awips/adapt/ifps/Xdefaults have world readable permission.
- h. If you are unsure about whether files contain proper permissions, you can issue the following commands as user root on ds1:
- ```
i. > cd /awips/adapt/ifps
ii. > chmod -R 777 localbin Xdefaults data
```

6. **Change the permission of /data/adapt/ifps/backup**

- i. Login to ds1 as user ifps
- j. Issue the following commands to change permissions
- ```
i.    >chmod 777 /data/adapt/ifps
ii.   >chmod 777 /data/adapt/ifps/backup
```

7. **Verify your text forecast product PILs in the afos2awips.txt file:**

- a. Download the checkPILs application on any Linux box (lx, px, dx) from:
<http://www-md.fsl.noaa.gov/eft/AWIPS/16k>
- b. Run the following commands from the directory where you saved the file:
- ```
i. >tar xvf checkPIL.tar
ii. >python checkPIL CCC (where CCC = WFO ID)
```

- c. Verify the list of reported PILs. In the afos2awips.txt file, remove any obsolete PILs, add any missing PILs, and add a space after any 8-character PILs so that they line up properly with the other PILs in the file.

## **PART 2: Install IFPS17.3**

Part 2 represents the steps necessary to install IFPS17.3. **Part 1 through Part 3 within the install instructions need to be completed on the same day.** MDL estimates Part 2 will take 90 minutes to complete. The time required for Part 3 depends on the amount of time it will take your site to verify the IFPS17.3 install.

Please follow the directions listed below.

### **1. Notify the NCF**

- a. Before starting the IFPS17.3 installation, please open a trouble ticket with the NCF. Should you require any assistance with your installation of IFPS17.3, a trouble ticket will already be opened.
- b. **During normal Eastern Time business hours, if you have any problems with your IFPS installation or have questions about anything related to the installation process, then please contact:**
  - Carl McCalla, Sr. at (301) 713-1065 x169 or
  - Iris Boon at (301) 713-1774 x183
- c. If you encounter any operational problems with IFPS, after successfully installing and after closing your installation Trouble Ticket, then, as usual, contact the NCF at (301) 713 -9344.

### **2. Ensure System is running**

- a. Log into a workstation as root, then ssh to the ds
  1. `> ssh ds1`
- b. Use the following command to verify that Informix is up and running correctly.
  - `> onstat -g dri`
    1. If you get a response this means that the Informix database is running.
    2. Using the output from the command above, verify that under the **Data Replication** heading, the type is primary and the state is on as indicated below.

*Informix dynamic server 7.31.UC2 – On-Line (Prim)–up 012319 –  
168592 kbytes*

#### ***Data Replication:***

| <i>Type</i>           | <i>state</i>     | <i>paired serve</i>                | <i>const dr ckpt</i> | <i>id/pg</i> |
|-----------------------|------------------|------------------------------------|----------------------|--------------|
| <b><u>primary</u></b> | <b><u>on</u></b> | <b><u>ONLINE_REP 126615/14</u></b> | <b><u>28</u></b>     |              |

***DR interval 30***

***DR interval 30***

***DR interval 30***

***DR auto 0***

***DRLOST FOUND /opt/informix/etc/.dr.lostfound***



**NOTE:** If (1) or (2) above are not true, you have a problem and need to start the Informix database before you proceed. Call the NCF for assistance.

- c. Verify that the PX, DS, or AS are not currently failed over. You will **not** be able to complete this install, if one of the PX, DS, or the AS servers is failed over.
- As user root, to check whether or not DS/AS are in failover mode, use the cmviewcl command.
  - IF YOU DO NOT HAVE THE DX AND NAS INSTALLED: As user root, to check whether or not PXs are in failover mode, use the clustat command.
  - If you DO have the DX and NAS installed: As user root, to check whether or not PXs are in failover mode, use the hb\_stat command.

**Sample Output of cmviewcl:**

CLUSTER STATUS

awips up

NODE STATUS STATE

as1-ggw up running

PACKAGE STATUS STATE PKG\_SWITCH NODE

as1swap up running enabled as1-ggw

NODE STATUS STATE

as2-ggw up running

PACKAGE STATUS STATE PKG\_SWITCH NODE

as2swap up running enabled as2-ggw

NODE STATUS STATE

ds1-ggw up running

PACKAGE STATUS STATE PKG\_SWITCH NODE

dsswap up running enabled ds1-ggw

NODE STATUS STATE

ds2-ggw up running

**Sample Output of clustat:**

Cluster Status Monitor (awips)

14:36:14

Cluster alias: Not Configured

===== Member Status =====

| Member  | Status | Node Id | Power Switch |
|---------|--------|---------|--------------|
| px1-ggw | Up     | 0       | Good         |
| px2-ggw | Up     | 1       | Good         |

===== Heartbeat Status =====

| Name       | Type            | Status         |
|------------|-----------------|----------------|
| px1-beat   | <--> px2-beat   | network ONLINE |
| /dev/ttyS1 | <--> /dev/ttyS1 | serial ONLINE  |

===== Service Status =====

| Service | Last Status | Monitor Owner | Restart Transition | Interval | Count |
|---------|-------------|---------------|--------------------|----------|-------|
| px1apps | started     | px1-ggw       | 13:04:49 Sep 22    | 0        | 0     |
| px2apps | started     | px2-ggw       | 13:09:18 Sep 22    | 0        | 0     |

**Sample Output of hb\_stat:**

Heartbeat Status Monitor Dec 01 16:46:42

===== Member Status =====

| Member   | Status | IP address  |
|----------|--------|-------------|
| px1-nhda | Up     | 165.92.21.7 |
| px2-nhda | Up     | 165.92.21.8 |

===== Service Status =====

| Service | IPaddr       | Cronfile        | Owner    | Start Time          |
|---------|--------------|-----------------|----------|---------------------|
| px1apps | 165.92.21.63 | px1cron,SITEpx1 | px1-nhda | 2004-11-23 21:05:26 |
| px2apps | 165.92.21.64 | px2cron,SITEpx2 | px2-nhda | 2004-11-23 21:19:57 |

- d. Verify that the site is not in service backup mode.  
 (To verify site is not in service backup mode, check that  
 /awips/adapt/ifps/bin/.cccsvcbuMode (where ccc=wfo id) file does not exist. If this file  
 exists, please run service backup cleanup script from the Service Backup GUI to exit  
 service backup mode).

### 3. Install IFPS17.3

- a. Verify that IFPS and WWA are **NOT** running on any workstation in the office. This includes HP as well as Linux workstations.
- b. Ensure the ifpServer and ifpServerWatcher processes **are running on px1**. You can use this command to make this determination:

```
> ps -fu ifps
```

If either is not running, then **as user ifps**, perform these two commands, substituting your site id for the ccc':

```
> cd /awips/ifps/primary/bin
```

```
> start_ifps_servers ccc
```

- c. Install IFPS17.3.

1. Insert the CD labeled "IFPS17.3 - Full" into the CD drive on px1

2. **NOTE:** First, close out any terminal you may have logged into as user ifps. If you are on one of the workstations, then open a new terminal as user **root** and then ssh into **px1**. Please be sure to be user root **before** ssh'ing from the workstation to px1.

3. Start a window to enter commands and make sure you are **user root**. You may choose to open a second window in case you need to enter other commands.

4. Mount the CD drive on **px1** as user **root**,

```
> mount /mnt/cdrom
```

5. In the same window, start the script to log install progress (**VERY IMPORTANT**)

Verify the log directory exists:

```
> ssh ds1 -n "ls -l /data/adapt/"
```

If directory "inslogs" is not shown, create it as follows:

```
> ssh ds1 -n "mkdir /data/adapt/inslogs"
```

```
> ssh ds1 -n "chmod 777 /data/adapt/inslogs"
```

Now create the log file:

```
> ssh ds1 -n "touch /data/adapt/inslogs/installIFPS17.3.out"
```

```
> ssh ds1 -n "chmod 777 /data/adapt/inslogs/installIFPS17.3.out"
```

```
> script -a /data/adapt/inslogs/installIFPS17.3.out
```

6. In the same window, change to the "/mnt/cdrom/PX" directory and run **"/installIFPS"**. Remember this command needs to be executed as **root** on the **px1**. This script needs to run to completion (i.e., the command line prompt returns). Do not <cntrl>C out of this script unless you are directed to do so by NCF or MDL personnel!!!

```
> cd /mnt/cdrom/PX
```

```
> ./installIFPS
```

- a. There are a few error checks that may appear during the IFPS17.3 install. These error checks will stop the install until the problem is resolved.
  - i. The first few checks verifies that there is enough space to install IFPS17.3 on all needed partitions. If there is not enough space, then the install will stop while this area is cleaned up. Once the directory has been cleaned, you can start the install by issuing the above command again.

- ii. The second check verifies that no sessions are connected to the ifps\_ccc and wwa\_ccc databases. If this check determines that there is a session connected to this database, it will try to kill the connected processes. But as a precaution, you should always make sure that you are not running any IFPS or WWA processes on any of the HP or Linux workstations.
  - iii. The install script will also check if all the IFPS services are added correctly. If they are not, install script will fail and ask you to correct it.
- 7. When the command line prompt is returned, the install script has finished. (The last few lines should indicate that install has finished.) Please finish the installation by performing the following step(s):
 

No additional steps at this time.
- 8. Type in 'exit' in the same window you issued the above commands to stop the script.

> exit

#### 4. **Review your IFPS17.3 install log**

>cd /data/adapt/inslogs

>more installIFPS17.3.out

Look for any errors in the log file. **Please be aware that some errors may be safely ignored.** Examples of such errors are listed below.

- a. bash: /root/.bashrc: Permission denied
- b. mv: setting permissions for  
`/data/adapt/ifps/backup/ifps\_okx.tgz': Operation not permitted
- c. /awips/ifps/primary/bin/sqlcmd: No such file or directory
- d. line 163: 9767 Segmentation fault read\_instructions  
\$update\_flag -input \$ins\_files
- e. ls: \*ccc: No such file or directory
- f. ls: ifps-\*: No such file or directory
- g. /awips/GFESuite/ifpsinstall/install/misc\_commands.sh:  
/awips/ifps/primary/bin/sqlcmd: No such file or directory
- h. ERROR: Unable to locate a recent netCDF file in  
/data/fxa/point/mos/ETA/netcdf/
- i. shell-init: could not get current directory:  
getcwd:cannot access parent directories:No such file or directory

**Please click on the link below and take a look at an example of a successful IFPS17.3 install log file. The instances in that sample log file where instructions indicate the NCF should be contacted should be ignored**

**and if you encounter similar instances in your log file, they should also be ignored.**

<http://www.nws.noaa.gov/mdl/icwf/IFPS17.3Full/installIFPS17.3.PX.out>

If you have a questions about anything related to the install process, please check first with your IFPS Focal Point. In particular, most instances of the ifpServer not starting cleanly can be traced to a localConfig.py file that is not compatible with the new IFPS release. In those cases, the IFPS Focal Point can generally quickly start the ifpServer after updating your localConfig.py file.

If the IFPS Focal Point is unable to resolve the problems, please call the NCF or one of the members of the Customer Support Team in Attachment 4 for assistance. Also take a look at the Lessons Learned section of the IFPS17.3 web page at::

<http://www.nws.noaa.gov/mdl/icwf/IFPS17.3Full/IFPS17.3.html#LessonsLearned>

When the install is completed, please call the NCF and close the trouble ticket you opened to begin this process.

## 5. **Umount & remove the IFPS17.3 CD**

```
> cd
> umount /mnt/cdrom
```

Take the IFPS17.3 CD out of the drive by pressing the eject button on the DC-ROM drive.

### **PART 3: Post-Install Instructions for IFPS17.3**

Part 3 represents the steps necessary to verify the IFPS17.3 install. These steps are not comprehensive, but are enough to verify that the basic system functionality is up and running. This part of the install instructions includes a list of items that MDL/FSL recommend be completed immediately after the IFPS17.3 install. This list is meant to focus the IFPS Focal Point on particular pieces of the software that were changed during the IFPS17.3 install. Although MDL/FSL attempts not to overwrite the local site's configuration of IFPS, it is, nevertheless, possible for this to occur. This part of the install instructions should lead the IFPS Focal Point to verify whether or not the site configuration was lost. This section will closely parallel the information listed in Part 0. If the site performed the necessary backup of the data referenced in Part 0, then the verification and any necessary updates should go smoothly at this time. The last part of this section includes a list of items that will need to be configured. Note, the site may elect to perform this configuration at a later time.

Please follow the directions listed below.

#### **1. Verify System Functionality**

- a. Verify that the IFPS servers started correctly

- (1) On px1 as ifps

- i. Check for the IFPS Servers (ifpServer, and ifpServerWatcher)  
**>ps -ewf | grep ifps**

##### **Sample:**

```
ifps 29463 1 0 Sep23 ? 01:13:27 /awips/GFESuite/primary/bin/run/ifpServer -D ...
ifps 29840 1 0 Sep23 ? 00:00:17 ifpServerWatcher -s lwx -P 98000000 -H px1f -T ...
```

- ii. If any of the above processes are not listed, then start the server(s)

**NOTE: You should see ifpServer and ifpServerWatcher processes running.**

```
>cd /awips/ifps/primary/bin
>./start_ifps_servers ccc
where ccc is the 3-letter site identifier
```

- b. Verify that the mexwxMonitor started correctly

- (1) On px2 as ifps

- i. Check for mexwxMonitor  
**>ps -ewf | grep mexwxMonitor**

##### **Sample:**

```
040 S ifps 31749 1 0 75 0 - 655 schedu Nov24 ? 00:00:02
/awips/ifps/primary/bin/mexwxMonitor /awips/adapt/ifps/localbin/ifps-aly.env.
```

- ii. If mexwxMonitor is not listed, then start it

```
>cd /awips/ifps/primary/bin
>./start_mexwxMonitor.sh
/awips/adapt/ifps/localbin/ifps-ccc.env
where ccc is the 3-letter site identifier
```

c. Verify that the IFPS cron files are running

- (1) On ds1 as ifps
  - i. Check for the IFPS cron  
`>crontab -l`
  - ii. If the cron is not listed, then start it  
`>cd /awips/adapt/ifps/crontab`  
`>crontab ifps-ccc.crontab`  
where ccc is the 3-letter site identification
- (2) On px1 as ifps (if you **DO NOT** have the DX and NAS installed)
  - i. Check for the IFPS cron  
`>crontab -l`
  - ii. If the cron is not listed, then configure and register it as user root  
`>su - root`  
`>cd /etc/cluster`  
`>config.crontabs.px`  
`>register.crontabs.px`
- (3) **-OR-** On px1 as ifps (if you **DO** have the DX and NAS installed)
  - i. Check for the IFPS cron  
`>grep ifps /etc/cron.d/px1cron`
  - ii. If no ifps processes are listed, then configure and register it as user root  
`>su - root`  
`>/awips/ops/bin/hb_config_crontabs`  
`>/awips/ops/bin/hb_halt px1apps`  
`>/awips/ops/bin/hb_run px1apps`
- (4) On px2 as ifps (if you **DO NOT** have the DX and NAS installed)
  - i. Check for the IFPS cron  
`>crontab -l`
  - ii. If the cron is not listed, then configure and register it as user root  
`>su - root`  
`>cd /etc/cluster`  
`>config.crontabs.px`  
`>register.crontabs.px`
- (5) **-OR-** On px2 as ifps (if you **DO** have the DX and NAS installed)
  - i. Check for the IFPS cron  
`>grep ifps /etc/cron.d/px2cron`
  - ii. If no ifps processes are listed, then configure and register it as user root  
`>su - root`  
`>/awips/ops/bin/hb_config_crontabs`  
`>/awips/ops/bin/hb_halt px2apps`  
`>/awips/ops/bin/hb_run px2apps`

### 3. New Functionality that could be Configured within IFPS

d. Please refer to Section #1 of the IFPS17.3 Release Notes for more details of new

functionality added within IFPS17.3. The URL is:

<http://www.nws.noaa.gov/mdl/icwf/IFPS17.3/Section1IFPS17.3RlseNotes.pdf>

#### 4. Export Configuration Data

- a. After successfully **installing**, **testing**, and **configuring** IFPS17.3, it is important that you export your site's configuration data to the NDFD central server. Having your site's latest configuration data available on the NDFD central server will greatly facilitate service backup should your site require it.
- b. **NOTE:** It is advised that IFPS17.3 WFOs SHOULD NOT perform Service Backup for IFPS16.2 WFOs. Similarly, IFPS16.2 WFOs should not perform Service Backup for IFPS17.3 WFOs. MDL and FSL both strongly recommend sticking with 17/17 and 16/16 backups. 17 backing up 16, and vice versa, might work, but we can't guarantee it.
- c. For more information related to exporting your site's configuration data, please visit the following references in the IFPS17 Users Guide:

[http://www.nws.noaa.gov/mdl/icwf/user\\_guide\\_ifps17/func/svc\\_backup\\_func.htm#Initiating](http://www.nws.noaa.gov/mdl/icwf/user_guide_ifps17/func/svc_backup_func.htm#Initiating)

[http://www.nws.noaa.gov/mdl/icwf/user\\_guide\\_ifps17/tech/svc\\_backup\\_tech.htm#ConfigDataExp](http://www.nws.noaa.gov/mdl/icwf/user_guide_ifps17/tech/svc_backup_tech.htm#ConfigDataExp)

**NOTE:** If you get an error message indicating your export file is too big, then you may safely remove the following files to create more available space:

- /awips/adapt/ifps/data/\*.bp
- /awips/adapt/ifps/data/\*.shp
- /awips/adapt/ifps/data/\*.shx



## **PART 4: Deinstall Instructions for IFPS17.3**

Part 4 represents the steps necessary to deinstall (if necessary) IFPS17.3. The deinstall is a radical step and should be considered only as a **last resort** to get the site back up and running with IFPS. As a result, any deinstall of IFPS17.3 should be carefully coordinated between the site, regional headquarters, Office of Science and Technology, MDL, FSL, and OCCWS.

**NOTE:** Any configuration completed since the IFPS17.3 install will be lost upon completing the deinstall. The system will be returned to the state just prior to the IFPS17.3 install. All forecast digital data will be lost and will need to be recreated unless the following steps are followed.

Please follow the directions listed below.

### **1. Notify the NCF**

- a. Before starting the IFPS17.3 de-install, please open a trouble ticket with the NCF. This will alert MDL that you are about to begin your IFPS de-install. Should you require any assistance with the de-install, a trouble ticket will already be opened.

### **2. Restore IFPS to IFPS16.2**

- a. Verify that IFPS and WWA are **NOT** running on any workstation in the office. This includes HP as well as Linux workstations.
- e. Verify that /awips/IFPS\_Release\_ID indicates that the current version of IFPS is 17.3. If it is not, stop.
- f. Deinstall IFPS17.3.

(1) **Save the Forecast data.** During the deinstall of IFPS17.3, the forecast grids will be lost. In order to prevent this data loss the grids must be manually saved off and then restored when the deinstallation has finished.

- i. Log into **px1** as user **ifps**. Check to see that the ifpsServer and ifpsServerWatcher processes are running by typing this command:  
`> ps -fu ifps`

If either process is not running, enter these commands, substituting your site id for 'ccc':

```
> cd /awips/ifps/primary/bin
> start_ifps_servers ccc
```

If the processes are running proceed to step ii.

- ii. `> cd /awips/GFESuite/primary/bin`

- iii. Substitute your site id (in upper case) for 'CCC' and note that there are two (2) underscores following 'GRID':

```
> ./ifpnetCDF -o /data/adapt/SaveFcstDB.cdf \
-h px1f -r 98000000 -d CCC_GRID__Fcst_00000000_0000
```

- iv. This will produce a file named SaveFcstDB.cdf in your /awips/GFESuite directory. Verify the file is there, and then exit px1.
- (2) If not already inserted, load the CD labeled "IFPS17.3 - Full" into the CD drive on px1
- (3) Log into a workstation as root, then ssh into the px1  
`>ssh px1`
- (4) Start two windows as user root. One to run the commands and the other to start the script file.
- (5) In the first window, if not already mounted, mount the CD drive  
`>mount /mnt/cdrom`  
`>cd /mnt/cdrom/PX`
- (6) In the first window, start the script to log deinstall progress  
`>ssh ds1 -n "touch /data/adapt/inslogs/deinstallIFPS17.3.out"`  
`>ssh ds1 -n "chmod 777 /data/adapt/inslogs/deinstallIFPS17.3.out"`  
`>script -a /data/adapt/inslogs/deinstallIFPS17.3.out`
- (7) In the second window run installIFPS with the "deinstall" option as user root (the script may take a second or two, before it sends information to the terminal screen).  
`>./installIFPS -d deinstall`  
The deinstallation will now start. It should inform you of what is doing by echoing statements to the screen. There may be several steps that may take awhile without displaying any output. Please be patient, and wait for the script to continue.
- (8) When the first window returns to the command prompt, the deinstallation has finished. Stop install log using this command:  
`>exit`  
  
(It will notify you that script has ended with a date/time stamp)
- (9) In the second window, review the deinstall IFPS17.3 log  
`>cd /data/adapt/inslogs`  
`>more deinstallIFPS17.3.out`  
Look for any errors in the log file. If you have questions about anything related to the de-install process, call the NCF for assistance. When the de-install is completed, please call the NCF and close the trouble ticket you opened to begin this process.
- (10) **Restore the forecast data.**
  - i. Log into **px1** as user **ifps**. Ensure the ifpServer and ifpServerWatcher processes are running by typing.  
`> ps -fu ifps`  
  
If either process is not running perform these two commands, substituting your site id for the 'ccc':  
`> cd /awips/ifps/primary/bin`

```
> start_ifps_servers ccc
```

ii. 

```
> cd /awips/GFESuite/primary/bin
```

Substitute your site's id (upper case) for the 'CCC' and note that there are two (2) underscores in the following command:

```
> ./iscMosaic -h 1x1 -r 98000000 -d \
CCC_GRID__Fcst_00000000_0000 -z -n -f \
/data/adapt/SaveFcstDB.cdf
```

iii. Move the SaveFcstDB.cdf file to the backup directory:

```
> cd /data/adapt
> mv SaveFcstDB.cdf \
/data/adapt/ifps/backup/
```

(11) Unmount & remove the IFPS17.3 CD

```
> cd
```

```
> umount /mnt/cdrom
```

Take the IFPS17.3 CD out of the drive by pressing the eject button on the CD-ROM drive.

### **Attachment 1: New/Merge/Replace File List for IFPS17.3**

The table below tracks changes in the IFPS data files and database tables associated with the transition from IFPS16.2 to IFPS17.3

The following **key** is used in the table.

**Merge** Attempt to preserve edited changes to this file/database table while providing any new information needed for IFPS to run in the IFPS17.3 environment. The IFP focal point should **back these files up** and **confirm that no site changes were lost during the IFPS17.3 upgrade.**

**Replace/Update** This file/database table must be completely replaced in order for IFPS to run in the IFPS17.3 environment. The IFP focal point should **back these files up** and **be prepared to merge his/her changes into the file once IFPS17.3 has been installed.**

**Delete** This file/database table was removed during the IFPS17.3 install.

**New** New files/database tables required for IFPS to run in the IFPS17.3 environment. There is no additional work required. The IFP focal point may have to customize these files, after IFPS17.3 is installed in order for a particular application to work correctly. For IFPS17.3 details and links to IFPS17.3 Release Notes and the IFPS17 User's Guide, go to:

<http://www.nws.noaa.gov/mdl/icwf/IFPS17.3Full/IFPS17.3.html#LessonsLearned>

**If a particular file/database table is not mentioned in the report below, assume that no changes are occurring during the IFPS17.3 install.**

| <b><u>File/Database Table</u></b> | <b><u>Use Key Above</u></b> |
|-----------------------------------|-----------------------------|
| ~ifps/Xdefaults<br><br>No changes | N/A                         |
|                                   |                             |

| <u>File/Database Table</u>        | <u>Use Key Above</u> |
|-----------------------------------|----------------------|
| ~ifps/crontab (/awips/adapt/ifps) |                      |
| ifps-ccc.crontab                  | New                  |
| ifps-purge.crontab                | New                  |
| /awips/ifps/primary               |                      |
| ifps-combined.crontab             | New                  |
| ifps-grdexport.crontab            | New                  |
| ifps-mosingest.crontab            | New                  |
|                                   |                      |
| ~ifps/localbin                    |                      |
| ifps-ccc.env                      | Merge                |
|                                   |                      |
| ~ifps/data                        |                      |
| No changes                        | N/A                  |
|                                   |                      |
| ifps_ccc database                 |                      |
| No changes                        | N/A                  |

| <u>File/Database Table</u>        | <u>Use Key Above</u> |
|-----------------------------------|----------------------|
| ~ifps/help/svcbu                  |                      |
| banner_exprtbkstieGrdMode.gif     | New                  |
| banner_exprtbksiteGrdMode.jpg     | Delete               |
| banner_exprtbksiteGrdToCSMode.gif | New                  |
| banner_exprtbksiteGrdToCSMode.jpg | Delete               |
| banner_exprtGrdMode.gif           | New                  |
| banner_exprtGrdMode.jpg           | Delete               |
| banner_exprtMode.gif              | New                  |
| banner_exprtMode.jpg              | Delete               |
| banner_ghgmode.gif                | New                  |
| banner_imprrtGrdMode.gif          | New                  |
| banner_imprrtGrdMode.jpg          | Delete               |
| banner_imprrtMode.gif             | New                  |
| banner_imprrtMode.jpg             | Delete               |
| banner_no_backup.gif              | New                  |
| banner_no_backup.jpg              | Delete               |
| banner_svcbuMode.gif              | New                  |
| banner_svcbuMode.jpg              | Delete               |
| banner_waitMode.gif               | New                  |
| banner_waitMode.jpg               | Delete               |
| choose_domain.jpg                 | New                  |
| choose_domain_multi1.jpg          | New                  |
| choose_domain_multi2.jpg          | New                  |
| clean_up.gif                      | New                  |
| do_not_cancel.gif                 | New                  |
| failed_site.jpg                   | New                  |
| gfe_startup.gif                   | New                  |
| multi_exprtbksiteGrdMode.gif      | New                  |
| multi_exprtbksiteGrdMode.jpg      | Delete               |
| multi_exprtbksiteGrdToCSMode.gif  | New                  |
| multi_exprtbksiteGrdToCSMode.jpg  | Delete               |
| multi_exprtGrdMode.gif            | New                  |
| multi_exprtGrdMode.jpg            | Delete               |
| multi_exprtMode.gif               | New                  |
| multi_exprtMode.jpg               | Delete               |
| multi_ghgmode.gif                 | New                  |
| multi_imprrtGrdMode.gif           | New                  |
| multi_imprrtGrdMode.jpg           | Delete               |
| multi_imprrtMode.gif              | New                  |
| multi_imprrtMode.jpg              | Delete               |
| multi_no_backup.gif               | New                  |
| multi_no_backup.jpg               | Delete               |
| multi_svcbuMode.gif               | New                  |
| multi_svcbuMode.jpg               | Delete               |

| <u>File/Database Table</u> | <u>Use Key Above</u> |
|----------------------------|----------------------|
| multi_waitMode.gif         | New                  |
| multi_waitMode.jpg         | Delete               |
| option_both.jpg            | New                  |
| option_gfe.jpg             | New                  |
| option_import_gfe.jpg      | New                  |
| option_import.jfg          | New                  |
| option_import_no_gfe.jpg   | New                  |
| option_none.jpg            | New                  |
| svcbu_faq.html             | New                  |
| svcbu_help.html            | New                  |
| svcbu_instructions.html    | New                  |
| svcbu_multidom.html        | New                  |
| xmessage_faq_01.jpg        | New                  |
| xmessage_faq_02.jpg        | New                  |
| xmessage_faq_03.jpg        | New                  |
| xmessage_faq_04.jpg        | New                  |
| xmessage_faq_05.jpg        | New                  |
| xmessage_faq_06.jpg        | New                  |
| xmessage_faq_07.jpg        | New                  |
| xmessage_faq_08.jpg        | New                  |
| xmessage_faq_09.jpg        | New                  |
| xmessage_faq_10.jpg        | New                  |
| xmessage_faq_11.jpg        | New                  |
| xmessage_faq_12.jpg        | New                  |
| xmessage_faq_13.jpg        | New                  |
| xmessage_faq_14.jpg        | New                  |
| xmessage_faq_15.jpg        | New                  |
| xmessage_faq_16.jpg        | New                  |
| xmessage_faq_17.jpg        | New                  |
| xmessage_faq_18.jpg        | New                  |
| xmessage_faq_19.jpg        | New                  |
| xmessage_faq_20.jpg        | New                  |
| xmessage_faq_21.jpg        | New                  |
| xmessage_faq_22.jpg        | New                  |
| xmessage_faq_23.jpg        | New                  |
| xmessage_faq_24.jpg        | New                  |
| xmessage_faq_25.jpg        | New                  |
| xmessage_faq_26.jpg        | New                  |
| xmessage_faq_27.jpg        | New                  |
| xmessage_faq_28.jpg        | New                  |
| xmessage_faq_29.jpg        | New                  |
| xmessage_faq_30.jpg        | New                  |
| xmessage_faq_31.jpg        | New                  |
| xmessage_faq_32.jpg        | New                  |

| <u>File/Database Table</u> | <u>Use Key Above</u> |
|----------------------------|----------------------|
| xmessage_faq_33.jpg        | New                  |
| xmessage_faq_34.jpg        | New                  |
| xmessage_faq_35.jpg        | New                  |
| xmessage_faq_36.jpg        | New                  |
| xmessage_faq_37.jpg        | New                  |
| xmessage_faq_38.jpg        | New                  |
| xmessage_faq_39.jpg        | New                  |
| xmessage_faq_40.jpg        | New                  |
| xmessage_faq_41.jpg        | New                  |
| xmessage_faq_42.jpg        | New                  |
| xmessage_faq_43.jpg        | New                  |
| xmessage_faq_44.jpg        | New                  |
| xmessage_faq_45.jpg        | New                  |
| xmessage_faq_46.jpg        | New                  |
| xmessage_faq_47.jpg        | New                  |
| xmessage_faq_48.jpg        | New                  |
| xmessage_faq_49.jpg        | New                  |
| xmessage_faq_50.jpg        | New                  |
| xmessage_faq_51.jpg        | New                  |
| xmessage_faq_52.jpg        | New                  |
| xmessage_faq_53.jpg        | New                  |
| xmessage_faq_54.jpg        | New                  |
| xmessage_faq_55.jpg        | New                  |
| xmessage_faq_56.jpg        | New                  |
| xmessage_faq_57.jpg        | New                  |
| xmessage_faq_58.jpg        | New                  |
| xmessage_faq_59.jpg        | New                  |
| xmessage_faq_60.jpg        | New                  |
| xmessage_faq_61.jpg        | New                  |
| xmessage_faq_62.jpg        | New                  |
| xmessage_faq_63.jpg        | New                  |
| xmessage_faq_64.jpg        | New                  |
| xmessage_faq_65.jpg        | New                  |
| xmessage_faq_66.jpg        | New                  |
| xmessage_faq_67.jpg        | New                  |
| xmessage_faq_68.jpg        | New                  |
| xmessage_faq_69.jpg        | New                  |
| xmessage_faq_70.jpg        | New                  |
| xmessage_faq_71.jpg        | New                  |
| xmessage_faq_72.jpg        | New                  |



| <u>File/Database Table</u> | <u>Use Key Above</u> |
|----------------------------|----------------------|
| xmessage_faq_73.jpg        | New                  |
| xmessage_faq_74.jpg        | New                  |
| xmessage_faq_75.jpg        | New                  |
| xmessage_faq_76.jpg        | New                  |
| xmessage_faq_77.jpg        | New                  |
| xmessage_faq_78.jpg        | New                  |
| xmessage_faq_79.jpg        | New                  |
| xmessage_faq_80.jpg        | New                  |
| xmessage_faq_81.jpg        | New                  |
| xmessage_faq_82.jpg        | New                  |
| xmessage_inst_01.jpg       | New                  |
| xmessage_inst_02.jpg       | New                  |
| xmessage_inst_03.jpg       | New                  |
| xmessage_inst_04.jpg       | New                  |
| xmessage_multidom_01.jpg   | New                  |
| xmessage_multidom_02.jpg   | New                  |
| xmessage_multidom_03.jpg   | New                  |
| xmessage_multidom_04.jpg   | New                  |
| xmessage_multidom_05.jpg   | New                  |
| xmessage_multidom_06.jpg   | New                  |

The following are some of the executables and scripts in /awips/adapt/ifps/bin/hp and /awips/ifps/primary/bin that have changed with the IFPS17.3 install. If the IFP focal point has made any adjustments to these within /awips/adapt/ifps/localbin, they will need to be **merged**.

- Under /awips/adapt/ifps/bin/hp:
  - \$ ndfd\_mhs\_ds.sh
- Under /awips/ifps/primary/bin (NOTE: This directory is NOT mounted, so any changes will need to be made on each PX and LX host):
  - \$ IFPS\_DXmove.sh
  - \$ MOSInterp
  - \$ addmos\_stns
  - \$ avn\_unldr
  - \$ bpfextract
  - \$ check\_svcbu.bat
  - \$ choose\_domai
  - \$ cleanup\_svbk
  - \$ config\_cntrl\_const
  - \$ config\_forecasters
  - \$ config\_geo

```

$ config_ifps
$ do_impirt_grd_proc
$ export_bksite_grid_data
$ export_bksite_grid_data_to_central_server
$ export_grid_data.AK
$ export_grid_data
$ export_localbin_for_svcbkup
$ failed_site.tcl
$ getwwalist (deleted)
$ gform
$ ghg_start.sh
$ ghg_stop.sh
$ ifpServerWatcher
$ import_GFEconfig_for_svcbkup
$ import_config_and_grids.bat
$ import_datadir_for_svcbkup
$ import_files_for_svcbkup
$ import_grid_data
$ import_localbin_for_svcbkup
$ import_svc_backup_data.bat
$ mexwx
$ mexwxMonitor
$ ndfd_mhs.sh
$ ndfd_mhs_px.sh (deleted)
$ prepare_grib2
$ proc_impirt_config_data
$ proc_impirt_grd_data
$ process_import_svc_backup_data
$ process_export_svc_backup_data
$ putwwa (deleted)
$ quick_start.bat
$ query_options.tcl
$ retrieve_svc_backup_dat
$ service_backup.bat
$ service_backup.tcl
$ start_impirt_grd
$ start_PX_ifps_server
$ start_PX_ifps_servers_for_svcbkup
$ stop_PX_ifps_server
$ stop_PX_ifps_servers_for_svcbkup
$ wwaList.py (deleted)

```

## **Attachment 2: IFPS17.3 Install Space**

**NOTE:** The install space requirements for IFPS17.3 are outlined in the table below. All sizes are in kilobytes (KB). If you do not have sufficient space in any of the partitions listed below, please contact Carl McCalla, Sr. at (301) 713-1065 x169 or Iris Boon at (301) 713-1774 x183 for assistance in identifying files that may be safely deleted.

If you need to clear up space under /data/adapt partition, you can safely delete some of the old IFPS and GFESuite backup files located under /data/adapt/ifps/backup directory. Backup files from IFPS15 or earlier (such as GFESuite15.tgz, ifps\_R15\_bin.tar.gz) can safely be removed.

### **Sites without Multi-domain configuration:**

|                  | <b>Host</b> |           |           |         |
|------------------|-------------|-----------|-----------|---------|
| <b>Partition</b> | ds1         | lx1..lxn  | px1       | px2     |
| /awips/ifps      | -           | 300,000   | 300,000   | 300,000 |
| /awips/GFESuite* | -           | 1,500,000 | 1,500,000 | -       |
| /awips/adapt     | 80,000      | -         | -         | -       |
| /data/adapt      | 1,300,000   | -         | -         | -       |

### **Sites with Multi-domain configuration:**

|                  | <b>Host</b> |           |           |           |
|------------------|-------------|-----------|-----------|-----------|
| <b>Partition</b> | ds1         | lx1..lxn  | px1 & px3 | px2 & px4 |
| /awips/ifps      | -           | 300,000   | 300,000   | 300,000   |
| /awips/GFESuite* | -           | 1,500,000 | 1,500,000 | -         |
| /awips/adapt     | 80,000      | -         | -         | -         |
| /data/adapt      | 1,300,000   | -         | -         | -         |

### **Attachment 3: Sample IFPS Install and Deinstall Log Files**

A Sample IFPS Install Log File is available at the following URL:

- <http://www.nws.noaa.gov/mdl/icwf/IFPS17.3Full/installIFPS17.3.PX.out>

**Attachment 4: Customer Support Team (CST) Contact List**

- [Carl.McCalla@noaa.gov](mailto:Carl.McCalla@noaa.gov)  
(301) 713-1065 x 169
- [Iris.Boon@noaa.gov](mailto:Iris.Boon@noaa.gov)  
(301) 713-0224 x 145
- [Paul.Hershberg@noaa.gov](mailto:Paul.Hershberg@noaa.gov)  
(301) 713-0056 x 181